

AMENDMENTS TO THE SPECIFICATION

First full paragraph on page 1:

The present invention relates to translucent ceramics suitable for optical components such as lenses, a process for producing ~~one of~~ the translucent ceramics, an optical component made of one of the translucent ceramics, and an optical device including the optical component.

Paragraph at page 2, line 19 to page 3, line 5:

In a the translucent ceramic ~~[[,]]~~ disclosed in Patent Document 3, principally containing $\text{Ba}(\text{Mg}, \text{Ta})\text{O}_3$ perovskite, ~~its~~ the optical properties, such as the refractive index and the Abbe number thereof, can be varied by partly replacing Mg and/or Ta with Sn and/or Zr, that is, a tetravalent element. An increase in the number of replaced elements increases the changes in the properties. However, it is difficult to greatly vary the refractive index and the Abbe number of the translucent ceramic because the upper limit of the number of replaced elements is small, 0.40. The refractive index thereof can be varied in the range of, for example, 2.071 to 2.082.

Paragraph at page 6, lines 3-6:

The translucent ceramics according to the present invention have a refractive index of ~~2.01~~ 1.9 or more, the linear transmittance being determined using visible light with a wavelength of 633 nm.

Paragraph at page 9, line 10 to page 10, line 1:

In the formula $Ba\{Ti_{x1}M_{x2}(Mg_{1-t}Zn_t)_y(Ta_{1-u}Nb_u)_z\}_vO_w$ described in the first aspect, the formula $Ba\{Ti_{x1}M_{x2}Zn_y(Ta_{1-u}Nb_u)_z\}_vO_w$ described in the ~~first~~ second aspect, and the formula $Ba\{Ti_{x1}M_{x2}Mg_y(Ta_{1-u}Nb_u)_z\}_vO_w$ described in the ~~first~~ third aspect, the molar ratio of Ta or Nb to Mg or Zn is represented by z/y and is in the range of 1.60 to 2.40 because of the perovskite structure. It is not preferable that the ratio z/y be outside the above range because the translucent ceramics would have a linear transmittance of less than 20%. The ratio of the B sites to the A sites is represented by v and is in the range of 1.00 to 1.05 because of the same reason described above. The abundance of O is represented by w and is close to 3. When the B sites of these perovskite compounds are occupied by at least one of tetravalent elements such as Ti, Sn, Zr, and Hf, these perovskite compounds have a cubic crystal structure and are translucent.

Page 10, line 5 from the bottom to page 11, line 11:

The composition of the translucent ceramics according to the first to third aspects of the present invention will now be separately described ~~for composition~~ in detail. The translucent ceramics of the first to third aspects are different in the number of replaced tetravalent elements from each other.

Page 13, last paragraph:

As described above, the translucent ceramics according to the first ~~and second~~ to third aspects can be more greatly varied in refractive index and Abbe number as compared to known translucent ceramics. This leads to an increase in the degree of freedom in designing optical devices.